

REMARKS

Applicants have amended Claims 23, 29, and 31 and therefore, upon entry of this amendment, Claims 1-31 are pending. Applicants respectfully request reconsideration and reexamination of the application.

Applicants wish to thank the Examiner for the telephone discussion on November 30, 2007. During the telephone discussion, the cited prior art was discussed in reference to Claim 23 and the Office Action rejections were discussed generally.

Claims 13, 14, 18, 29, and 30 [i.e., 31] were objected to because of various informalities. Specifically, for Claims 13, 14, and 18, it is suggested that the claim language should be directed to a "digital electrical output signal" rather than its plural form. Applicants respectfully disagree as these claims are directed to an embodiment that translates optical pulses into digital electrical output signals (e.g., as set forth on page 19 lines 27-32) and therefore, Claims 13, 14, and 18 are in proper form for allowance. For Claims 29 and 30 (and 31), Applicants have amended Claims 29 and 31, as noted above, to clarify and make explicit what is implicit in these claims. Therefore, Applicants respectfully request that the objection to Claims 13, 14, 18, 29, and 30 (and 31) be withdrawn.

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Claims 1, 3, and 13 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, for Claim 1, it is suggested that the claim is incomplete for omitting essential structural connections in that according to the specification the means must have two inputs. Applicants respectfully disagree and note, for example, that Fig. 3 illustrates one input (and one optical signal) from which a clock signal and an input signal may be derived; therefore essential structural connections are not omitted from Claim 1. For Claim 3, it is suggested that there is insufficient antecedent basis on line 7 for "the optical clock." Applicants respectfully disagree as "an optical clock signal" is recited on lines 4 and 5 to provide antecedent basis for "the optical clock signal" on line 7.

For Claim 13, it is suggested that the claim is incomplete for omitting essential structural connections in that the claim recites "analog delay modulator ... to provide optical pulses," but according to the specification the optical pulses originate with an optical pulse generator (e.g., as recited in Claim 15, with the optical pulse generator and the analog delay modulator being two different

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elements coupled together). Applicants respectfully disagree as Claim 13 recites "analog delay modulator" and Claim 15 further limits "analog delay modulator" to comprise "an optical pulse generator adapted to provide the optical pulses; and a waveguide ...". It is unclear the basis for the assertion by Examiner that "optical pulse generator" and "analog delay modulator" are two different elements coupled together, as this is contrary to the claim language (i.e., Claim 15). Therefore, Applicants submit that Claim 13 is in proper form and in condition for allowance.

Therefore, Applicants respectfully request that the rejection under 35 U.S.C. § 112, second paragraph, of Claims 1, 3, and 13 be withdrawn.

Claims 23-25 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,219,172 to Yariv [herein referred to as "Yariv"].

As noted previously, Examiner cites Yariv (fig. 1 and 4:18 to 5:2) as disclosing an optical pulse discriminator adapted to receive the optical pulses and provide a digital electrical signal (OA pg 2). Applicants respectfully disagree as Yariv sets forth that the opto-electronic device 100 provides separated pulse trains 132P1 to 132PN that are routed

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to N parallel optical detectors 140 and are converted into N parallel electronic channels 142, which may then be provided to N analog-to-digital converters (ADCs) (4:18-60). Thus, Yariv may be viewed as providing serial to parallel conversion for an analog signal to accommodate electronic ADC processing speeds (4:53-65), but does not disclose "an optical pulse discriminator adapted to receive each of the optical pulses and provide a corresponding digital electrical signal" as recited in Claim 23.

However in the Response to Arguments (OA pgs 5-6), Examiner argues that Yariv discloses the claimed limitations and states that "[i]n fig. 1 the pulses of a main optical pulse signal are separated, producing plural separated pulse signals and each of the separate pulse signals is then converted from an optical signal to an electrical signal via a photodetector and then to a digital electrical signal via an ADC."

Applicants respectfully submit that this is quite different than what is disclosed and claimed as, for example, a conventional, electrical ADC is not required to convert the analog electrical signal to a digital electrical signal, because a digital electrical signal representation is provided in the optical domain by the optical pulse discriminator to provide the digital electrical signal (e.g., page 5 ln 22-pg 6

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ln 15, Fig. 1). Therefore, no analog-to-digital conversion is needed in the electrical domain (i.e., no ADC, as is required in Yariv). Applicants have amended Claim 23 to further clarify and submit that Yariv fails to teach or suggest "wherein the optical pulse discriminator associates a wavelength to each of the optical pulses based on the corresponding time delay which is used to determine a value of the digital electrical signal" as recited in Claim 23.

Therefore, Applicants respectfully submit that Claim 23 patentably distinguishes over Yariv and that corresponding dependent Claims 24 and 25 are also distinguishable for at least the same reasons. Therefore, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) of Claims 23-25 be withdrawn.

Applicants have made certain typographical corrections to the specification, as indicated above, to correct and make consistent references to Fig. 10. Applicants submit no new matter has been added.

Accordingly, Applicants respectfully submit that Claims 1-31 are in proper form for allowance. Reconsideration and withdrawal of the rejections are respectfully requested and a timely Notice of Allowance is solicited.

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If there are any questions regarding any aspect of the application, please call the undersigned at (949) 752-7040.


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November 30, 2007

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Respectfully submitted,



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